Purdue Bioscience

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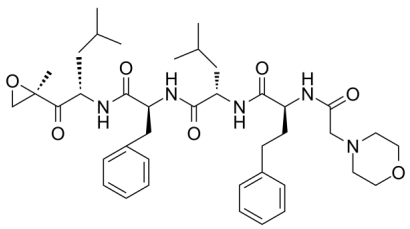
Certificate of Analysis

Catalog Number	BP22534
Product Name	Carfilzomib

Physical and Chemical Properties

CAS No.	868540-17-4
Chemical Formula	C40H57N5O7
Molecular Weight	719.91
Solubility	DMF: ≥ 100 mg/mL (138.91 mM) DMSO: 50 mg/mL (69.45 mM, Need ultrasonic)
Storage	Powder: -20°C for 2 years In solvent: -80°C for 1 year
Chemical Structure OR Tested Image	

Product Information

Description	Carfilzomib (PR-171) is an irreversible proteasome inhibitor with an IC50 of 5 nM in ANBL-6 and RPMI 8226 cells.

In vitro	Carfilzomib displays preferential in vitro inhibitory potency against the ChT-L activity in the β5 subunit, with over 80% inhibition at doses of 10 nM and above and little or no effect on the PGPH and T-L activities at doses up to 100 nM. Carfilzomib decreases the viability of ANBL-6, RPMI 8226 cells, U266 and KAS-6/1 cells with an IC50 less than 5 nM. Carfilzomib overcome Dex resistance, in that MM1.R cells reveals an IC50 of 15.2 nM, less than the value of 29.3 nM for parental MM1.S cells. Co-treatment with carfilzomib and HDACIs leads to synergistic induction of cell death in various mantle cell lymphoma lines and primary mantle cell lymphoma cells. Combined treatment with carfilzomib or ONX0912 with vorinostat in HF-4B and Granta cells sharply increases caspase activation, PARP cleavage, JNK activation, MnSOD2 induction, and DNA damage.
In vivo	Carfilzomib (2.0 mg/kg, i.v.) in conbination with 70 mg/kg vorinostat virtually abrogates tumor growth in Granta-luciferace cell xenograft flank model. Combined treatment results in a pronounced reduction in bioluminescence compared to animals treated with single agents or controls with minimal toxicity.

Analytical Data

HPLC	Shows Min >99% purity
H-NMR	Consistent with structure
Stability and Solubility Advice	Information on product stability, especially in solution, has rarely been reported and in most cases we can only provide a general guideline. We recommend that once the stock solution has been prepared, it be stored in equal quantities in sealed vials and used within 1 month. Avoid repeated freezing and thawing cycles. Storage conditions for some special products should be referred to their storage details.

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